

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

TO: John H. Robertus
Executive Officer

FROM: Jeremy Haas
Environmental Scientist
Watershed Protection Northern Unit

DATE: October 6, 2005

SUBJECT: Response to Written Comments Regarding the Request to Modify the Aliso Creek Bacteria Monitoring Program

On September 23, 2005 the Regional Board notified interested persons of the request to modify the Aliso Creek bacteria monitoring program. Interested persons were notified that written comments received before October 6 would be provided to the Regional Board. One comment was received during the comment period from the Surfrider Foundation, Laguna Beach Chapter¹.

The Surfrider Foundation was in general support of the request to revise the monitoring program, but had several concerns and offered six comments to address those concerns. A summary of its specific comments and responses to those comments are provided below.

Comment No. 1: Winter Monitoring

The Surfrider Foundation suggested that some monitoring be continued in the Winter months of January and February to complement the proposed summer monitoring and because water-contact recreation activities occur at Aliso Beach throughout the year.

Response to Comment No. 1

The proposed revisions to the monitoring program do not affect monitoring at Aliso Beach or the mouth of Aliso Creek. The commenter is correct that water-contact recreation activities occur throughout the year at Aliso Beach. Water quality samples are already collected twice per week year round from four stations at Aliso Beach and at the mouth of Aliso Creek by the South Orange County Wastewater Authority (SOCWA). The Aliso Creek municipal dischargers have been incorporating SOCWA's data into the Aliso Creek quarterly progress reports, rather than collected the data themselves.

¹ The South Laguna Civic Association provided comments after the comment period. Those comments without a response are provided to the Regional Board in Supporting Document 8.

Monitoring data within the watershed demonstrate that indicator bacteria levels are relatively low during the months of January and February. As a result, continued monitoring during that time within the watershed was considered an inefficient use of resources by the Dischargers. The statistical power analyses conducted by the Dischargers to determine the revised monitoring program was not performed on data collected during January and February. It is, therefore, uncertain whether data collected during those months would provide statistically valid results.

Comment No. 2: Monitoring at Coast Highway Bridge

The Surfrider Foundation suggested that a monitoring location be added in the vicinity of Coast Highway bridge.

Response to Comment No. 2

The monitoring station used by SOCWA (see response to Comment No.1) to assess water quality at the mouth of Aliso Creek is in the vicinity of Coast Highway Bridge.

Comment No. 3: Monitor Impacts of Runoff to the Ocean Environment

The Surfrider Foundation seeks acknowledgement that the Aliso Creek Watershed does not end at the shoreline and, therefore, suggested that the monitoring program include a component to monitor for the water quality and biological effects of “urban runoff-derived non-natural creek flow” into the Pacific Ocean.

Response to Comment No. 3

This comment does not address proposed revisions to the monitoring program. Biological effects are not currently being assessed by the monitoring required by the Regional Board’s Directive. Nonetheless, it is acknowledged that the effects of urban runoff and stormwater can extend beyond the shoreline into the marine environment. Fresh water streams provide several functions for the near-shore environment, and this relationship can be impaired by land-based activities. The Southern California Coastal Water Research Project (SCCWRP) “Bight ‘03” program is currently investigating several related issues, including the spatial extent and duration of stormwater plumes in the coastal ocean and also dynamics of shoreline microbiology.

Comment No. 4: Ecological Effects of Nuisance Flows

The Surfrider Foundation comments that the ecological effects of increased non-natural water flow and elevated bacteria concentrations should also be evaluated and corrected.

Response to Comment No. 4

Comment noted. This comment does not address proposed revisions to the monitoring program. The purpose of the current and proposed monitoring program is to assess compliance with the

water quality objectives for recreational beneficial uses. Bioassessment is, however, one component of the monitoring program for the Municipal NPDES requirements.

Comment No. 5: Monitoring Dry-Weather Flows

The Surfrider Foundation believes that it is important to measure flow in storm drains and in Aliso Creek in order to assess the progress of the Dischargers efforts to reduce pollution in Aliso Creek. Surfrider suggests, therefore, that efforts to reduce non-native flows should be a stated goal of any Aliso Creek monitoring, and dry weather flow reduction should be used as a key metric in measuring progress.

Response to Comment No. 5

The Dischargers propose to continue measuring flow estimates at the storm drain monitoring locations, but flow estimates are not proposed for the monitoring stations within the receiving waters. In the quarterly progress reports for the current Aliso Creek monitoring program, the Dischargers have recognized that dry-weather flows are typically the primary conveyance of indicator bacteria. As a result, several of their implemented and planned management measures seek to reduce the contribution of dry-weather flows (e.g., irrigation runoff and wash water) to the storm drains and receiving waters.

Comment No. 6: Additional Monitoring Locations

The Surfrider Foundation recommends adding storm drains to the revised monitoring plan that ranked “worst” in the Dischargers’ analyses of previous data for bacteria loading, flow, and input concentration. The specific storm drains recommend are: J02P08 (#1 in load and #2 in flow), J03P02 (#2 in load and #1 in flow) and J01P27 (#3 in load and #1 in concentration).

Response to Comment No. 6

The storm drains recommended by Surfrider are not included in the proposed revised monitoring plan because they are not the highest-priority storm drains of any municipality. The Dischargers prioritized storm drain monitoring stations based on where the most concentrated efforts of each City to implement BMPs have occurred or are planned to occur. Of the three drains recommended by Surfrider, two (J02P08 and J01P27) drain urbanized areas of Aliso Viejo, and one (J03P02) drains an urbanized area of Laguna Niguel. Those cities have selected other drains for their highest priority management efforts.

The Laguna Niguel drain J03P02 has received substantial attention by the City and County over the last few years because it was the subject of a Cleanup and Abatement Order (recently rescinded by Order No. R9-2005-132). Constructed wetlands to treat dry-weather flows have been installed to address urban runoff from the drainage area. As a result, the City of Laguna Niguel has shifted its highest priority to storm drain J04.

The City of Aliso Viejo has selected the J01P08 storm drain as its highest priority. The storm drain outfall J01P08 has historically had some of the highest bacteria concentrations in the watershed. As a result, the County of Orange implemented an ultra-violet treatment plant at the outfall to disinfect summer season flows. When active, this has reduced the summer concentrations. Because the bacteria inputs to the UV plant, however, remain very high, the City of Aliso Viejo has selected that drainage area as its highest priority location for source reduction management measures.

Another consideration for potential storm drain locations is whether the proposed monitoring frequency (20 times during the Summer) would be able to meet the statistical objectives for detecting load reduction (detect a 50% reduction) and impact reduction (detect a 30% reduction) of the proposed plan. Based on the power analyses provided by the Dischargers, the statistical ability to detect the load reduction objectives could be met at J01P27 and J03P02, but not at J02P08. The required frequency to detect the targeted 50% load reduction in ten years at J02P08 is 40 samples during the Summer. Similarly, the ability to statistically detect the reduction in impact on downstream receiving waters could be met at J01P27 and J03P02. No power analysis was provided for monitoring design for fecal Coliform impact at the J02P08 storm drain.